

basis of the device type discriminated in said discriminating step, and loading the selected device driver program.

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256. (New) A computer program for instructing an information processing apparatus to perform:

a discriminating step of discriminating a device type of an external device on the basis of data stored in the external device; and

a loading step of selecting the device driver program in the external device or the device driver program in a memory area provided in the information processing apparatus, on the basis of the device type discriminated in said discriminating step, and loading the selected device driver program.--

REMARKS

The claims now pending in this application are Claims 230-256, with Claims 230, 234, 237, 238, 243, 244, 248, 252, and 254-256 being the independent claims. Claims 230, 234, 237, 238, 244, 248, and 252 have been amended. Claims 254-256 are newly-presented.

The newly-presented Claims 254-256 have been added to provide an additional scope of protection. Support for the newly-presented claims may be found, for example, on page 6, line 9, et. seq. of the specification. No new matter has been added.

In the Official Action dated October 11, 2002, Claims 230-253 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent No. JP 2-122355 (Kiyozumi) and U.S. Patent No. 4,902,146 (Ishikawa). Claims 230-237 and 252 were rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent No. 363273954 (Yabumoto).

Reconsideration and withdrawal of these rejections are respectfully requested in view of the above amendments and the following remarks.

The rejections of the claims over the cited art respectfully are traversed.

Nevertheless, without conceding the propriety of the rejections, Claims 230, 234, 237, 238, 244, 248, and 252 have been amended to even more clearly recite various novel features of the present invention. Support for these amendments may be found in the original application.

Independent Claim 230 relates to an information processing apparatus comprising a connection unit, arranged for connecting a detachable external device to the information processing apparatus; a recognition unit, arranged for recognizing connection of the external device to the information processing apparatus; a discrimination unit, arranged for discriminating a device type of the external device connected by the connection unit on the basis of data stored in the connected external device; and a loading unit, arranged for, in response to the recognition unit recognizing connection of the external device, selecting a device driver program for controlling the connected external device in the external device or a device driver program for controlling the connected external device in a memory area provided in the information processing apparatus, on the basis of the device type discriminated by the discrimination unit, and loading the selected device driver program.

By this arrangement, the information processing apparatus can control an external device connected to the apparatus using a device driver program which is suitable for the type of external device that is connected using available memory and without requiring additional steps by the user.

In contrast, the Kiyozumi, Ishikawa, and Yabumoto patents are not understood to disclose or suggest a loading unit, arranged for, in response to the recognition unit recognizing

connection of the external device, selecting a device driver program for controlling the connected external device in the external device or a device driver program for controlling the connected external device in a memory area provided in the information processing apparatus, on the basis of the device type discriminated by the discrimination unit, and loading the selected device driver program, as recited in Claim 230.

For this reason, Claim 230 is allowable over the cited references. Independent Claims 234 and 237 recite similar features and are allowable for similar reasons.

Independent Claim 238 relates to an information processing apparatus comprising a discrimination unit, arranged for discriminating whether an external device is a first type of device in which a memory is provided for storing a device driver program for controlling the external device or a second type of device in which the memory is not provided; and a loading unit, arranged for selecting the device driver program for controlling the external device in the memory provided in the external device or the device driver program in a memory provided in the information processing apparatus, on the basis of the device type discriminated by the discrimination unit, and loading the device driver program in the memory provided in the external device if the device driver program in the memory provided in the external device is selected.

By this arrangement, the information processing apparatus can control an external device connected to the apparatus using a device driver program which is suitable for the type of external device that is connected using available memory and without requiring additional steps by the user.

In contrast, the Kiyozumi and Ishikawa patents are not understood to disclose or suggest a loading unit, arranged for selecting the device driver program for controlling the

external device in the memory provided in the external device or the device driver program in a memory provided in the information processing apparatus, on the basis of the device type discriminated by the discrimination unit, and loading the device driver program in the memory provided in the external device if the device driver program in the memory provided in the external device is selected, as recited in Claim 238.

Accordingly, Claim 238 is allowable over these references under 35 U.S.C. § 103. Independent Claims 243, 244, and 248 recite similar features and are allowable for similar reasons.

Independent Claim 252 relates to a device detachably connected to an information processing apparatus, the device comprising a memory unit, arranged for storing information which indicates a device type of the device and storing a device driver program for controlling the device, wherein the information processing apparatus discriminates the device type of the device on the basis of the information stored in the memory unit, selects the device driver program stored in the memory unit or a device driver program for controlling the device stored in the information processing apparatus, and loads the device driver program from the device into the information processing apparatus if the driver program stored in the memory unit is selected.

By this arrangement, the information processing apparatus can control an external device connected to the apparatus using a device driver program which is suitable for the type of external device that is connected using available memory and without requiring additional steps by the user.

In contrast, the Kiyozumi, Ishikawa, and Yabumoto patents are not understood to disclose or suggest a memory unit, arranged for storing information which indicates a device type of the device and storing a device driver program for controlling the device, wherein the

information processing apparatus discriminates the device type of the device on the basis of the information stored in the memory unit, selects the device driver program stored in the memory unit or a device driver program for controlling the device stored in the information processing apparatus, and loads the device driver program from the device into the information processing apparatus if the driver program stored in the memory unit is selected, as recited in Claim 252.

Accordingly, Claims 252 is allowable over the cited art.

Newly-presented Claim 254 relates to an information processing apparatus comprising a discrimination unit, arranged for discriminating a device type of an external device on the basis of data stored in the external device; and a loading unit, arranged for selecting a device driver program for controlling the external device in the external device or a device driver program for controlling the external device in a memory area provided in the information processing apparatus, on the basis of the device type discriminated by the discrimination unit, and loading the selected device driver program.

By this arrangement, the information processing apparatus can control an external device connected to the apparatus using a device driver program which is suitable for the type of external device that is connected using available memory and without requiring additional steps by the user.

In contrast, the Kiyozumi, Ishikawa, and Yabumoto patents are not understood to disclose or suggest a loading unit, arranged for selecting a device driver program for controlling the external device in the external device or a device driver program for controlling the external device in a memory area provided in the information processing apparatus, on the basis of the device type discriminated by the discrimination unit, and loading the selected device driver program, as recited in Claim 254.

Accordingly, Claim 254 is allowable over the cited art. Claims 255 and 256 recite similar features and are allowable for similar reasons.

The dependent claims depend from one or another of the independent claims and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of their respective independent claim and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Applicant believes the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submits that the present application is in allowable form. Favorable consideration of the claims and passage to issue of the present application at the Examiner's earliest convenience earnestly are solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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MARKED-UP VERSION SHOWING CHANGES TO THE CLAIMS

230. (Amended)) An information processing apparatus comprising:

a connection unit, arranged for connecting a detachable external device to said information processing apparatus;

a recognition unit, arranged for recognizing connection of the external device to said information processing apparatus;

a discrimination unit, arranged for discriminating a device type of the external device connected by said connection unit on the basis of data stored in the connected external device; and

a loading unit, arranged for, in response to said recognition unit recognizing connection of the external device, [loading] selecting a device driver program for controlling the connected external device [from] in the external device [via said connection unit or from] or a device driver program for controlling the connected external device in a memory area provided in said information processing apparatus, on the basis of the device type discriminated by said discrimination unit, and loading the selected device driver program.

231. (Unamended) An apparatus according to claim 230, further comprising a control unit arranged for controlling the connected external device based on the device driver program loaded by said loading unit.

232. (Unamended) An apparatus according to claim 230, further comprising a reading unit arranged for reading data indicating the device type of the connected external device from the external device, wherein said discrimination unit discriminates the device type on the basis of the data read by said reading unit.

233. (Unamended) An apparatus according to claim 230, wherein said information processing apparatus is an electronic camera.

234. (Amended) A method of loading a device driver program for controlling an external device detachably connected to an information processing apparatus, said method comprising:

a recognizing step of recognizing connection of the external device to the information processing apparatus;

a discriminating step of discriminating a device type of the connected external device on the basis of data stored in the connected external device; and

a loading step of, in response to said recognizing step recognizing connection of the external device, [loading] selecting the device driver program [from] in the external device or [from] the device driver program in a memory area provided in the information processing apparatus, on the basis of the discriminated device type, and loading the selected device driver program.

235. (Unamended) A method according to claim 234, further comprising a controlling step of controlling the connected external device based on the device driver program loaded in said loading step.

236. (Unamended) An apparatus according to claim 234, further comprising a reading step of reading data indicating the device type of the connected external device from the external device, wherein said discriminating step discriminates the device type on the basis of the data read in said reading step.

237. (Amended) A computer program for instructing an information processing apparatus to perform:

a recognizing step of recognizing connection of an external device to the information processing apparatus;

a discriminating step of discriminating a device type of the connected external device on the basis of data stored in the connected external device; and

a loading step of, in response to said recognizing step recognizing connection of the external device, [loading] selecting a device driver program [from] in the external device or [from] the device driver program in a memory area provided in the information processing apparatus, on the basis of the discriminated device type, and loading the selected device driver program.

238. (Amended) An information processing apparatus comprising:

a discrimination unit, arranged for discriminating whether an external device is a first type of device in which a memory is provided for storing a device driver program for controlling the external device or a second type of device in which the memory is not provided; and

a loading unit, arranged for [loading] selecting the device driver program for controlling the external device [from] in the memory provided in the external device or the device driver program in a memory provided in said information processing apparatus, on the basis of the device type discriminated by said discrimination unit, and loading the device driver program in the memory provided in the external device if the device driver program in the memory provided in the external device is selected [if said discrimination unit discriminates that the external device is the first type of device].

239. (Unamended) An apparatus according to claim 238, further comprising a recognition unit arranged for recognizing connection of the external device to said information processing apparatus, wherein said discrimination unit discriminates the device type in response to said recognition unit recognizing the connection of the external device.

240. (Unamended) An apparatus according to claim 238, wherein said discrimination unit discriminates the device type based on data stored in the external device.

241. (Unamended) An apparatus according to claim 238, wherein said loading unit loads the device driver program for controlling the external device from a memory provided

in said information processing apparatus if said discrimination unit discriminates that the external device is the second type of device.

242. (Unamended) An apparatus according to claim 238, wherein said information processing apparatus is an electronic camera.

243. (Unamended) An information processing apparatus comprising a processor unit, arranged for performing:

a discriminating step of discriminating whether an external device is a first type of device in which a memory is provided for storing a device driver program for controlling the external device or a second type of device in which the memory is not provided; and

a loading step of loading the device driver program for controlling the external device from the memory provided in the external device if said discriminating step discriminates that the external device is the first type of device.

244. (Amended) A method of loading a device driver program for controlling an external device, comprising:

a discriminating step of discriminating whether the external device is a first type of device in which a memory is provided for storing the device driver program or a second type of device in which the memory is not provided; and

a loading step of [loading] selecting the device driver program [from] in the memory provided in the external device or the device driver program in a memory provided in

the information processing apparatus, on the basis of the device type discriminated in said discriminating step, and loading the device driver program in the memory provided in the external device if the device driver program in the memory provided in the external device is selected [if said discriminating step discriminates that the external device is the first type of device].

245. (Unamended) A method according to claim 244, further comprising a recognizing step of recognizing connection of the external device to an information processing apparatus, wherein said discriminating step discriminates the device type in response to said recognizing step recognizing the connection of the external device.

246. (Unamended) A method according to claim 244, further comprising a reading step of reading data stored in the external device, wherein said discriminating step discriminates the device type based on the read data.

247. (Unamended) A method according to claim 244, wherein said loading step loads the device driver program for controlling the external device from a memory provided in an information processing apparatus if said discriminating step discriminates that the external device is the second type of device.

248. (Amended) A computer program for instructing an information processing apparatus to perform:

a discriminating step of discriminating whether an external device is a first type of device in which a memory is provided for storing a device driver program for controlling the external device or a second type of device in which the memory is not provided; and

a loading step of [loading] selecting the device driver program [from] in the memory provided in the external device or the device driver program in a memory provided in the information processing apparatus, on the basis of the device type discriminated in said discriminating step, and loading the device driver program in the memory provided in the external device if the device driver program in the memory provided in the external device is selected [if said discriminating step discriminates that the external device is the first type of device].

249. (Unamended) A program according to claim 248, wherein said program further instructs the information processing apparatus to perform a recognizing step of recognizing connection of the external device to the information processing apparatus, wherein said discriminating step discriminates the device type in response to said recognizing step recognizing the connection of the external device.

250. (Unamended) A program according to claim 248, wherein said program further instructs the information processing apparatus to perform a reading step of reading data stored in the external device, wherein said discriminating step discriminates the device type based on the read data.

251. (Unamended) A program according to claim 248, wherein said loading step comprises loading the device driver program for controlling the external device from a memory provided in the information processing apparatus if said discriminating step discriminates that the external device is the second type of device.

252. (Amended) A device detachably connected to an information processing apparatus, said device comprising:

a memory unit, arranged for storing information which indicates a device type of said device and storing a device driver program for controlling said device, wherein the information processing apparatus discriminates the device type of said device on the basis of the information stored in said memory unit, selects the device driver program stored in said memory unit or a device driver program for controlling said device stored in the information processing apparatus, and loads the device driver program from said device into the information processing apparatus if the driver program stored in said memory unit is selected.

253. (Unamended) A device according to claim 252, wherein the information processing apparatus discriminates whether said device is a first type of device in which a memory is provided for storing the device driver program or a second type of device in which the memory is not provided on the basis of the information stored in said memory unit.